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CHISCHE AKADEMIE DER WISSENSCHAFTEN
THEMATISCH-NATURWISSENSCHAFTLICHE KLASSE
DENKSCHRIFTEN, 113. BAND

ZUM BAU DES HIMALAYA

VON

GERHARD FUCHS

(MIT 70 ABBILDUNGEN UND 9 FALTTAFELN)

BEILAGEN

WIEN 1967

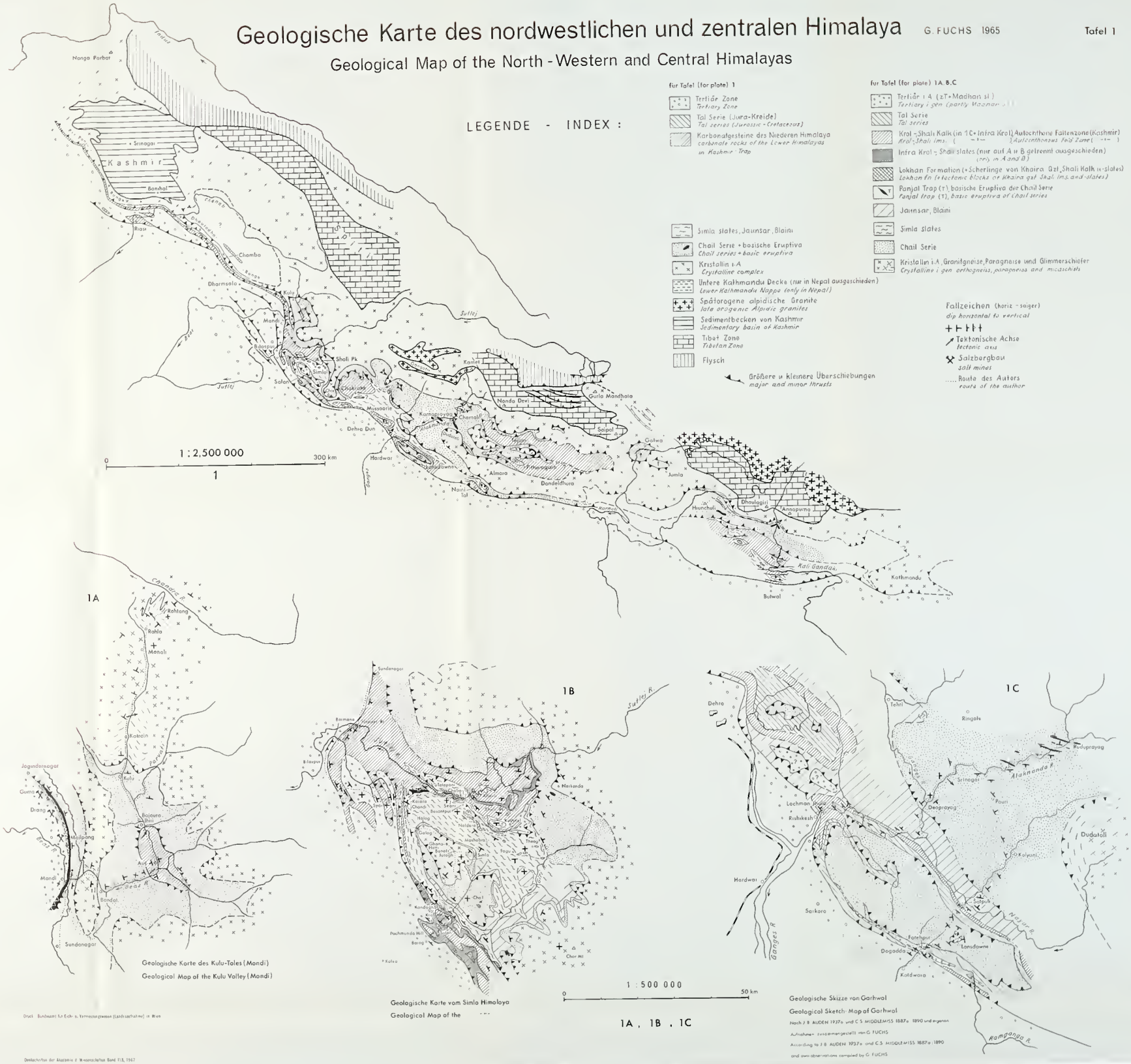
IN KOMMISSION BEI SPRINGER-VERLAG, WIEN/NEW YORK
DRUCK: CHRISTOPH REISSER'S SÖHNE AG, WIEN V

Geologische Karte des nordwestlichen und zentralen Himalaya

G. FUCHS 1965

Tafel 1

Geological Map of the North-Western and Central Himalayas



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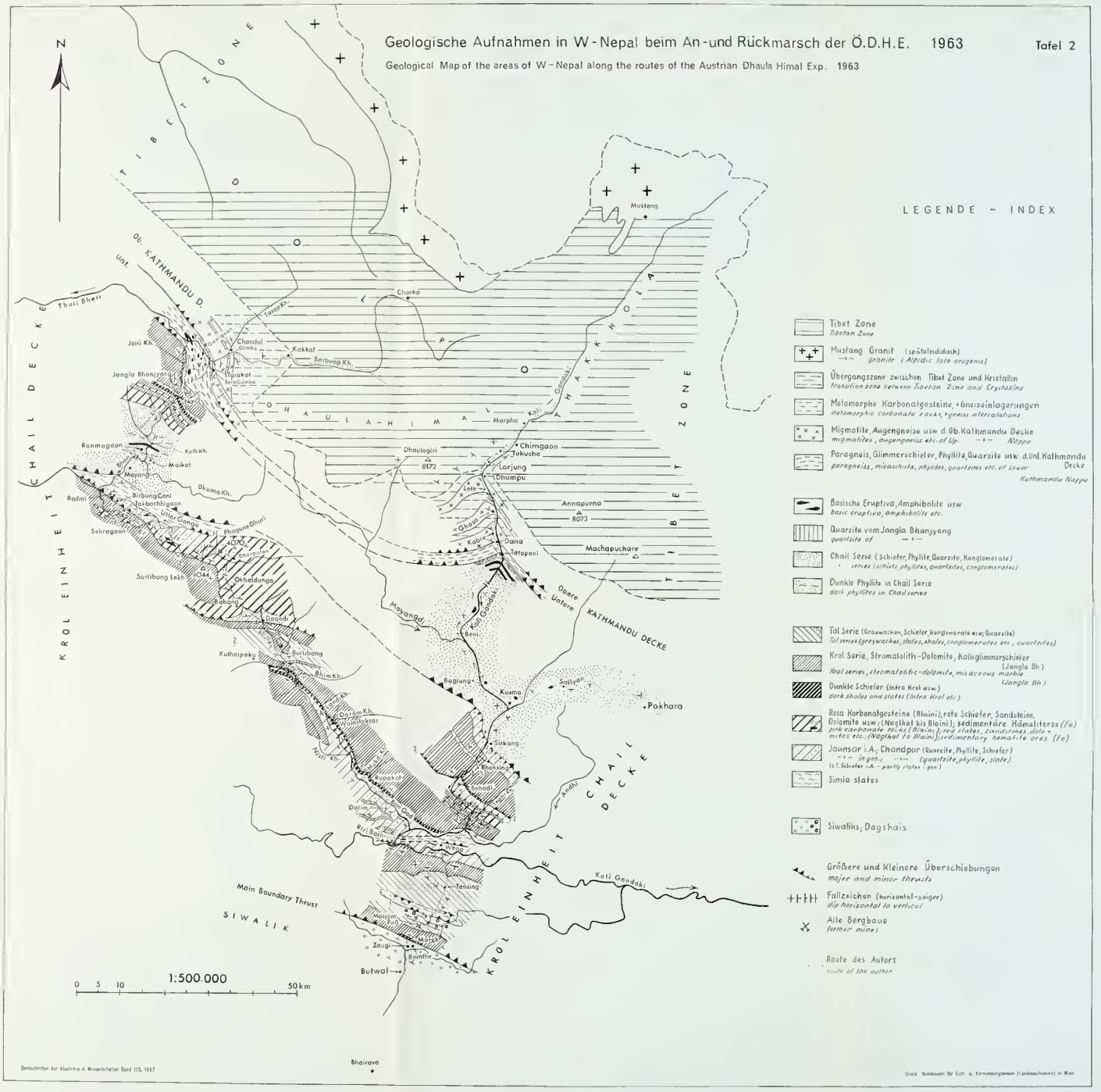
Denkschriften der Akademie d. Wissenschaften Band 113, 1967

Geologische Aufnahmen in W-Nepal beim An- und Rückmarsch der Ö.D.H.E. 1963

Tafel 2

Geological Map of the areas of W-Nepal along the routes of the Austrian Dhaula Himal Exp. 1963



LEGENDE - INDEX

- Tibet Zone — *Tibetan Zone*
- Mustang Granit (spätalpidisch) — *granite (Alpidic late orogenic)*
- Übergangszone zwischen Tibet Zone und Kristallin — *transition zone between Tibetan Zone and Crystalline*
- Metamorphe Karbonatgesteine, Gneiseinlagerungen — *metamorphic carbonate rocks, gneiss intercalations*
- Migmatite, Augengneise usw. d. Ob. Kathmandu Decke — *migmatites, augengneiss etc. of Up.* — Nappe
- Paragneis, Glimmerschiefer, Phyllite, Quarzite usw. d. Unt. Kathmandu Decke — *paragneiss, micaschists, phyllites, quartzites etc. of Lower* — *Kathmandu Nappe*
- Basische Eruptiva, Amphibolite usw — *basic eruptiva, amphibolite etc.*
- Quarzite vom Jangla Bhanjyang — *quartzite of*
- Chail Serie (Schiefer, Phyllite, Quarzite, Konglomerate) — *series (schists, phyllites, quartzites, conglomerates)*
- Dunkle Phyllite in Chail Serie — *dark phyllites in Chail series*
- Tal Serie (Grauwacken, Schiefer, Konglomerate usw; Quarzite) — *Tal series (greywackes, shales, conglomerates etc.; quartzites)*
- Krol Serie, Stromatolith-Dolomite, Kalkglimmerschiefer (Jangla Bh.) — *Krol series, stromatolitic-dolomite, micaceous marble (Jangla Bh.)*
- Dunkle Schiefer (Infra Krol usw.) — *dark shales and slates (Infra Krol etc.)*
- Rosa Karbonatgesteine (Blaini), rote Schiefer, Sandsteine, Dolomite usw. (Nagthal bis Blaini); sedimentäre Hämalitерze (Fe) — *pink carbonate rocks (Blaini); red slates, sandstones, dolomites etc. (Nagthal to Blaini); sedimentary hematite ores (Fe)*
- Jaunsar i. A.; Chandpur (Quarzite, Phyllite, Schiefer) — *(quartzite, phyllite, slate)* — *(z. T. Schiefer i. A. – partly slates; gen.)*
- Simla slates
- Siwaliks; Dagshais
- Größere und Kleinere Überschiebungen — *major and minor thrusts*
- Fallzeichen (horizontal-saiger) — *dip horizontal to vertical*
- Alte Bergbaue — *former mines*
- Route des Autors — *route of the author*

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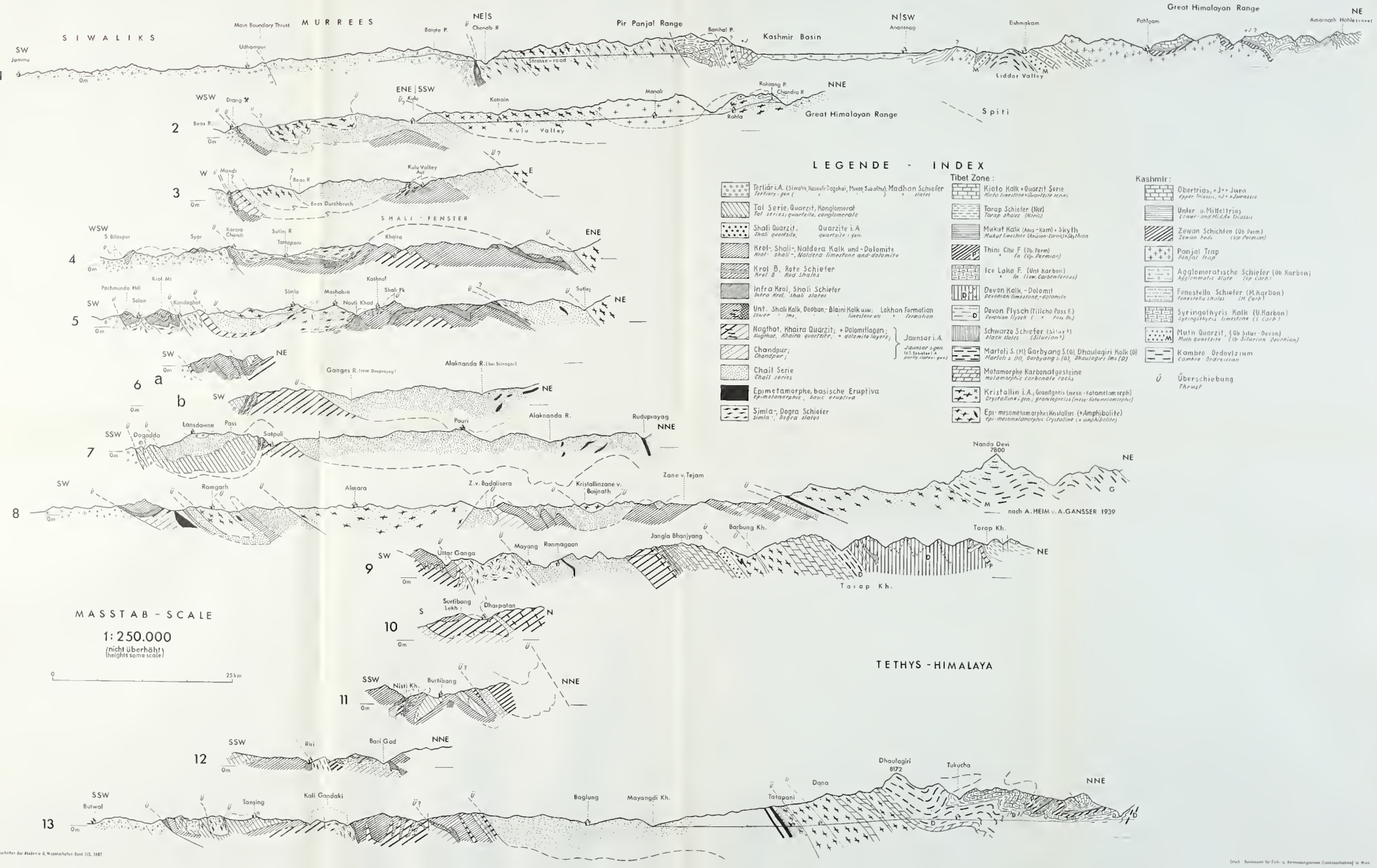
Profile durch den nordwestlichen und zentralen Himalaya. Sections through the North-Western and Central Himalayas. G. FUCHS 1965



LEGENDE - INDEX

- Tertiär i.A. (Siwalik, Kasauli, Dagshai, Murree, Subathu), Madhan Schiefer — Tertiary in gen. (+ slates)
- Tal Serie, Quarzit, Konglomerat — Tal series, quartzite, conglomerate
- Shali Quarzit, Quarzite i.A. — Shali quartzite, quartzite in gen.
- Krol-, Shali-, Naldera Kalk und -Dolomite — Krol-, shali-, Naldera limestone and -dolomite
- Krol B, Rote Schiefer — Krol B, Red shales
- Infra Krol, Shali Schiefer — Infra Krol, shali slates
- Unt. Shali Kalk, Deoban-, Blaini Kalk usw.; Lokhan Formation — Lower shali limestone etc. + formation
- Nagthat, Khaira Quarzit; + Dolomitlagen; — Nagthat, Khaira quartzite, + dolomite layers; } Jaunsar i.A. (z.T. Subathu i.A. partly slates geol.)
- Chandpur; — Chandpur;
- Chail Serie — Chail series
- Epimetamorphe, basische Eruptiva — Epimetamorphic, basic eruptive
- Simla-, Dogra Schiefer — Simla-, Dogra slates

Tibet Zone:

- Kioto Kalk + Quarzit Serie — Kioto limestone + Quartzite series
- Tarap Schiefer (Nor) — Tarap shales (Norian)
- Mukut Kalk (Anis - Kam) + Skyth — Mukut limestone (Anisian-Carn) + Skythian
- Thini, Chu F. (Ob. Perm) — Th in (Up. Permian)
- Ice Lake F. (Unt Karbon) — Th in (Low. Carboniferous)
- Devon Kalk, -Dolomit — Devonian limestone, -dolomite
- Devon Flysch (Tilicho Pass F.) — Devonian flysch (+ Kros Fm.)
- Schwarze Schiefer (Silur ?) — Black slates (Silurian ?)
- Martoli S. (M) Garbyang S. (G), Dhaulagiri Kalk (D) — Martoli s. (M), Garbyang s. (G), Dhaulagiri lms (D)
- Metamorphe Karbonatgesteine — metamorphic carbonate rocks
- Kristallin i.A., Granitgneis (meso - katametamorph) — Crystalline in gen., granite gneiss (meso - katametamorphic)
- Epi-mesometamorphes Kristallin (+Amphibolite) — Epi-mesometamorphic Crystalline (+ amphibolites)

Kashmir:

- Obertrias, +Jura — Upper Triassic, +Jur + Jurassic
- Unter u. Mitteltrias — Lower- and Middle Triassic
- Zewan Schichten (Ob Perm) — Zewan beds (Up Permian)
- Panjal Trap — Panjal Trap
- Agglomeratische Schiefer (Ob Karbon) — Agglomeratic slate (Up Carb.)
- Fenestella Schiefer (M. Karbon) — Fenestella shales (M. Carb.)
- Syringothyris Kalk (U. Karbon) — Syringothyris limestone (L. Carb.)
- Muth Quarzit, (Ob Silur - Devon) — Muth quartzite (Up Silurian-Devonian)
- Kambro Ordovizium — Cambro-Ordovician

Ü Überschiebung — Thrust

Sitzungsberichte der Akademie d. Wissenschaften Band 113, 1987

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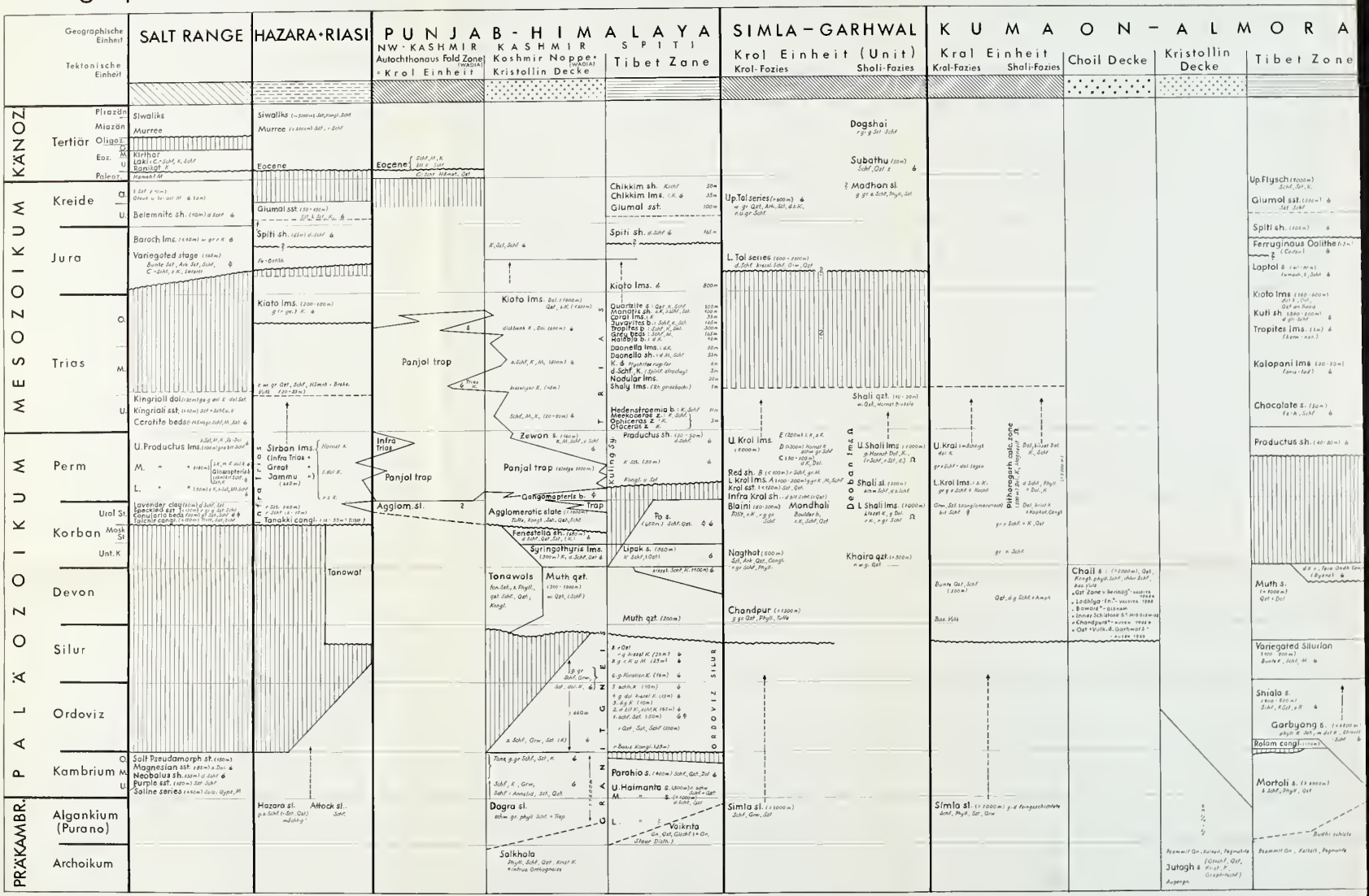
Stratigraphische Tabelle des Himalaya – Stratigraphic Table of the Himalayas

G. FUCHS, 1966.



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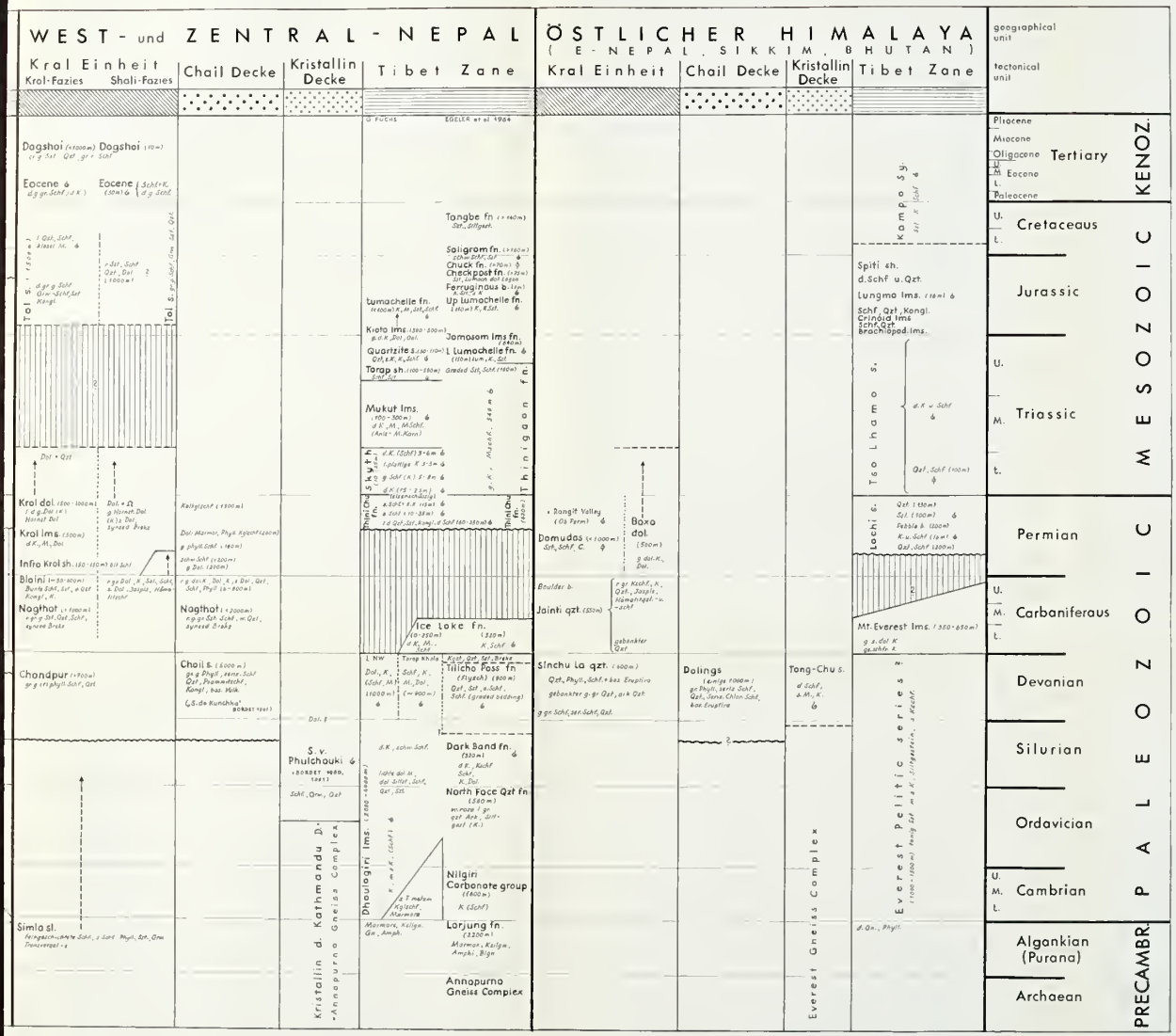

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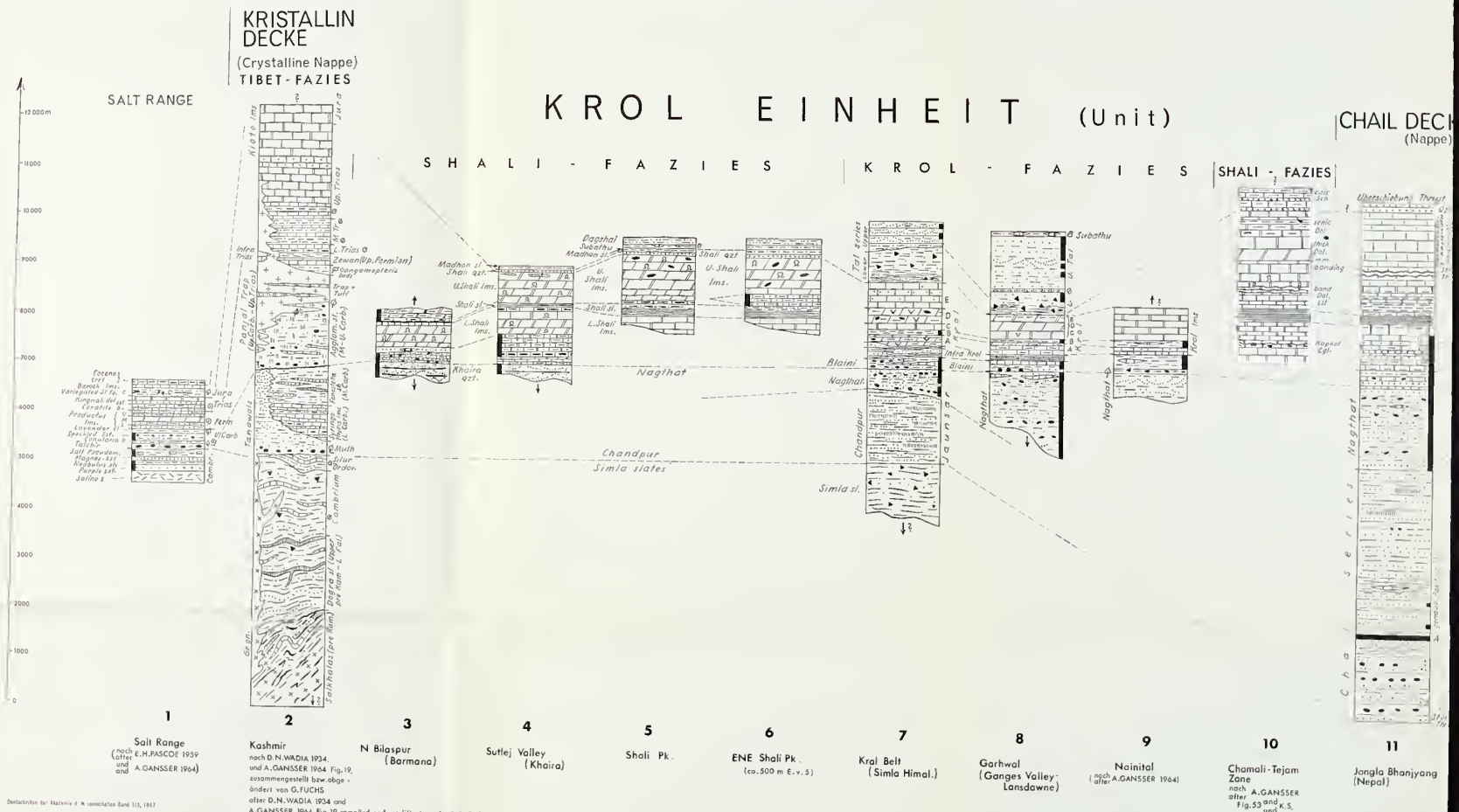
Korrelation der Schichtfolge des Niederen Himalaya - Correlation of Stratigraphical Secti



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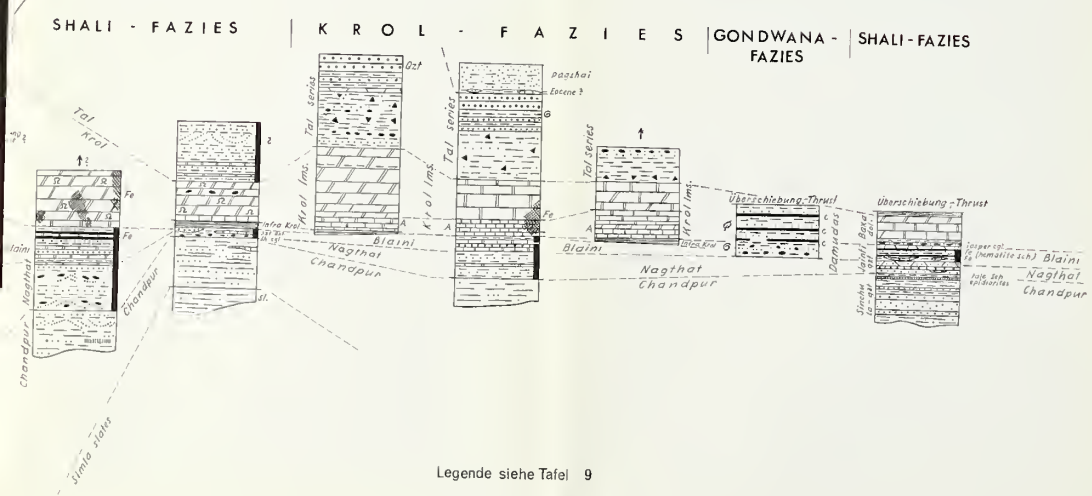
KE KROL EINHEIT (Unit)

SHALI - FAZIES | KROL - FAZIES | GONDWANA - FAZIES | SHALI - FAZIES



Legende siehe Tafel 9

Index see plate 9

12	13	14	15	16	17	18
Surtibang L. - Uttar Ganga (Nepal)	Bari Gad (Nepal)	Riri Bazar u. NW Tansing (Nepal)	N Tansing (Nepal)	Marek (NNE Butwal) (Nepal)	Sikkim (nach/after A.GANSSER 1964)	Baxa (Bhutan) (nach/after A.GANSSER 1964, Fig. 120)

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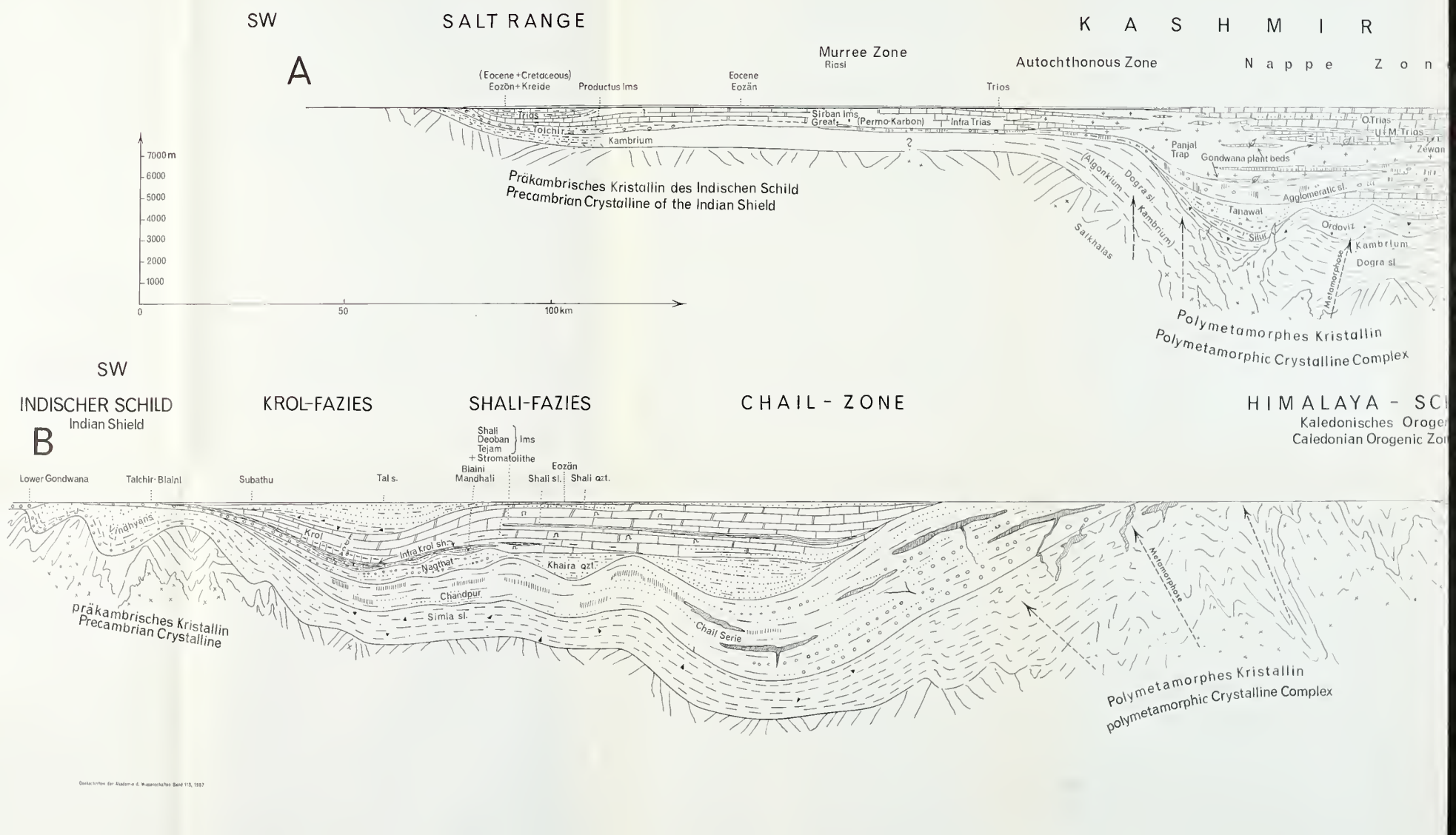
Stratigraphische Ideal-Profile durch den Punjab- und Zentral-Himalaya IDEALIZED STRATIGRAPHIC SECTIONS THROUGH THE PUN



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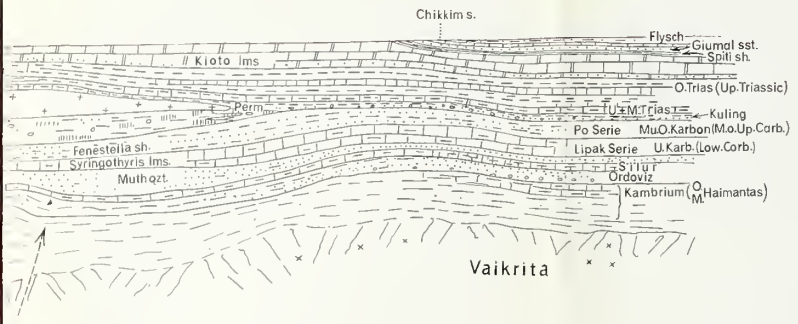

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HWELLE Himalayan Ridge

T I B E T Z O N E

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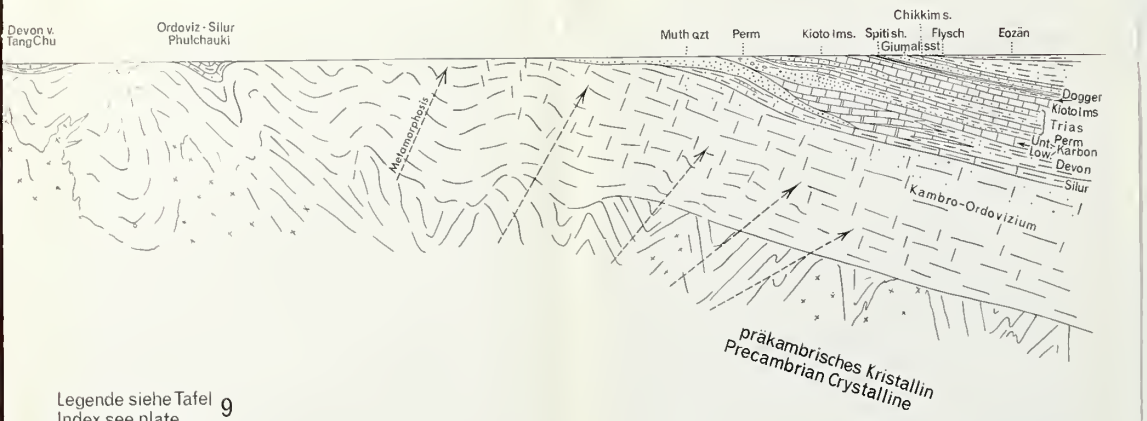

Legende siehe Tafel 9
Index see plate

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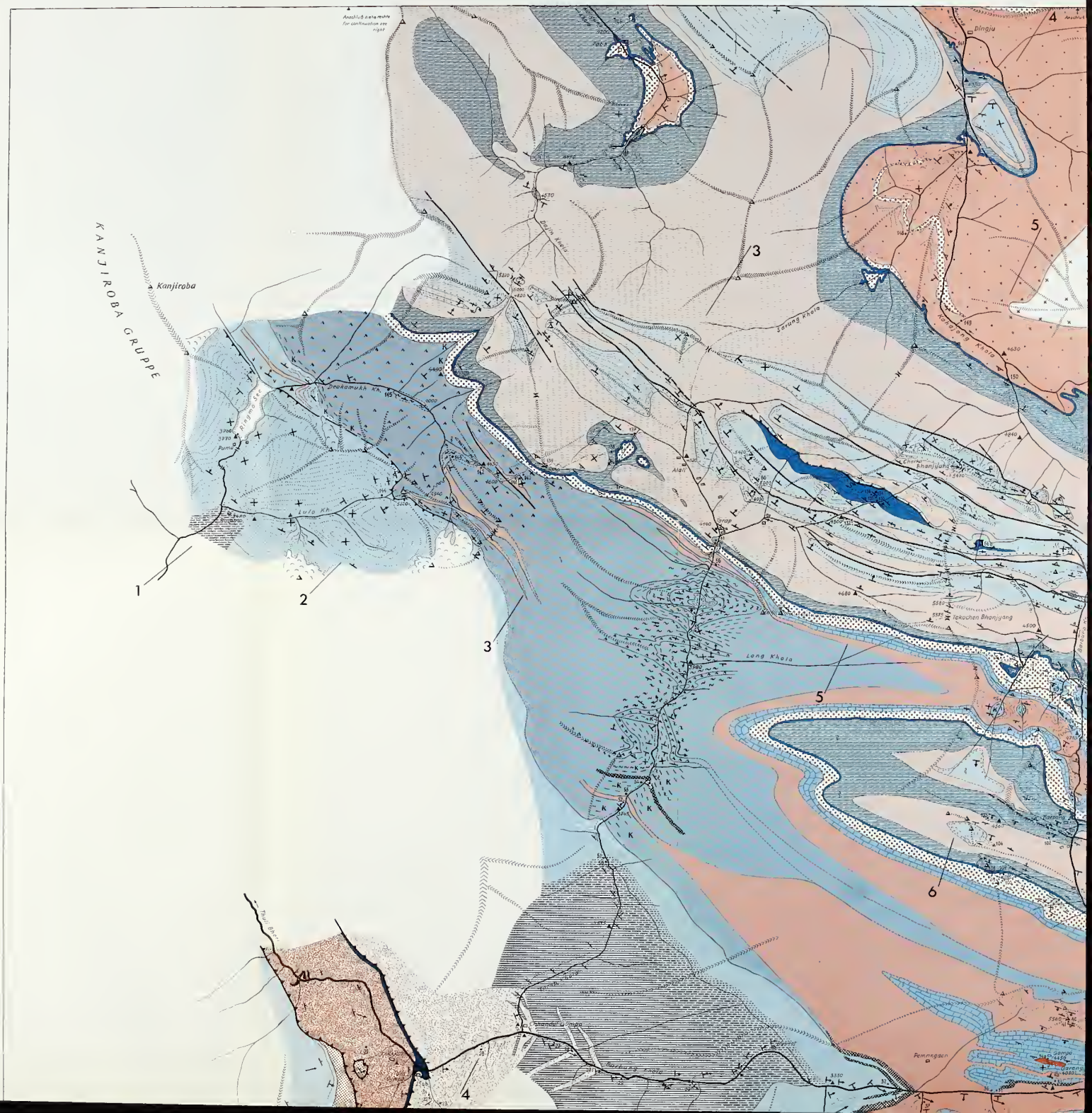
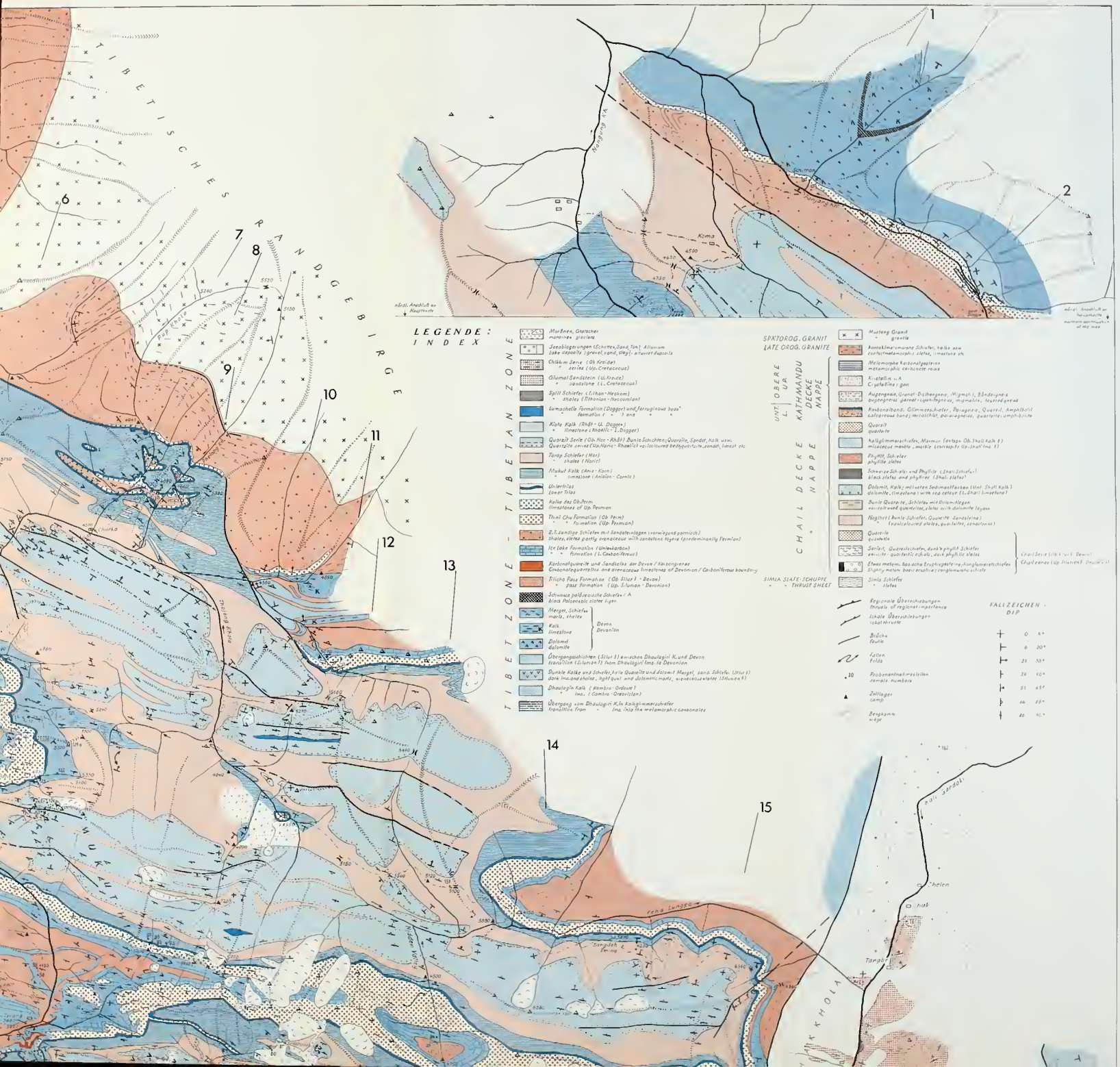
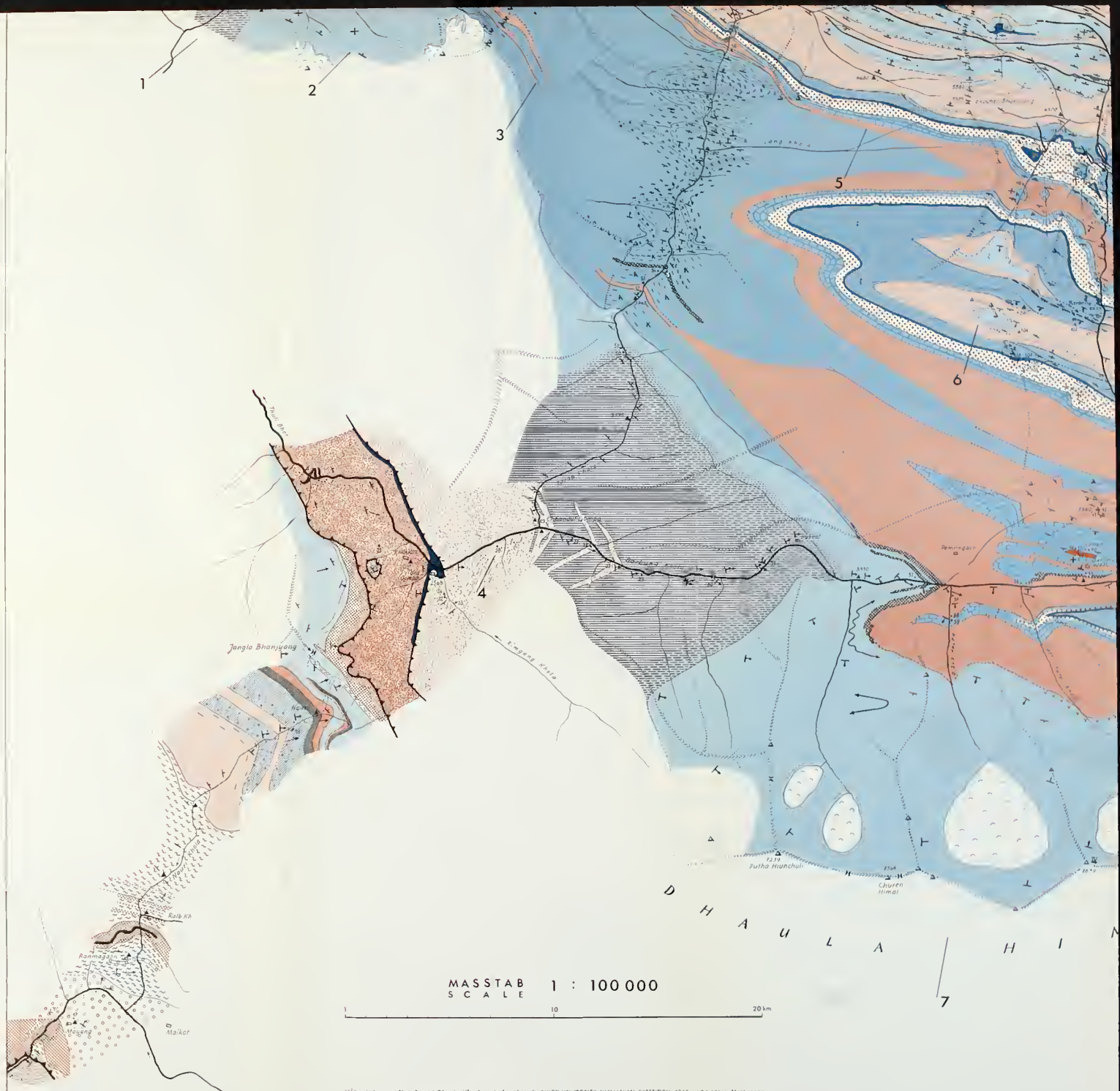
GEOLOGISCHE KARTE VON DOLPO UND DHAULA HIMAL Geologic



cal Map of the Dolpo region and the Dhaula Himal G. FUCHS, 1964





MASSTAB 1 : 100 000
SCALE

1 10 20 km

Höhenkoten im Mukut- und Dhaula Himal nach Angaben der NIHON UNIVERSITY HIMALAYAN EXPEDITION 1962 und eigenen Messungen
Heights in the Mukut- and Dhaula Himal according to the NIHON UNIVERSITY HIMALAYAN EXPEDITION 1962 and own measurements.

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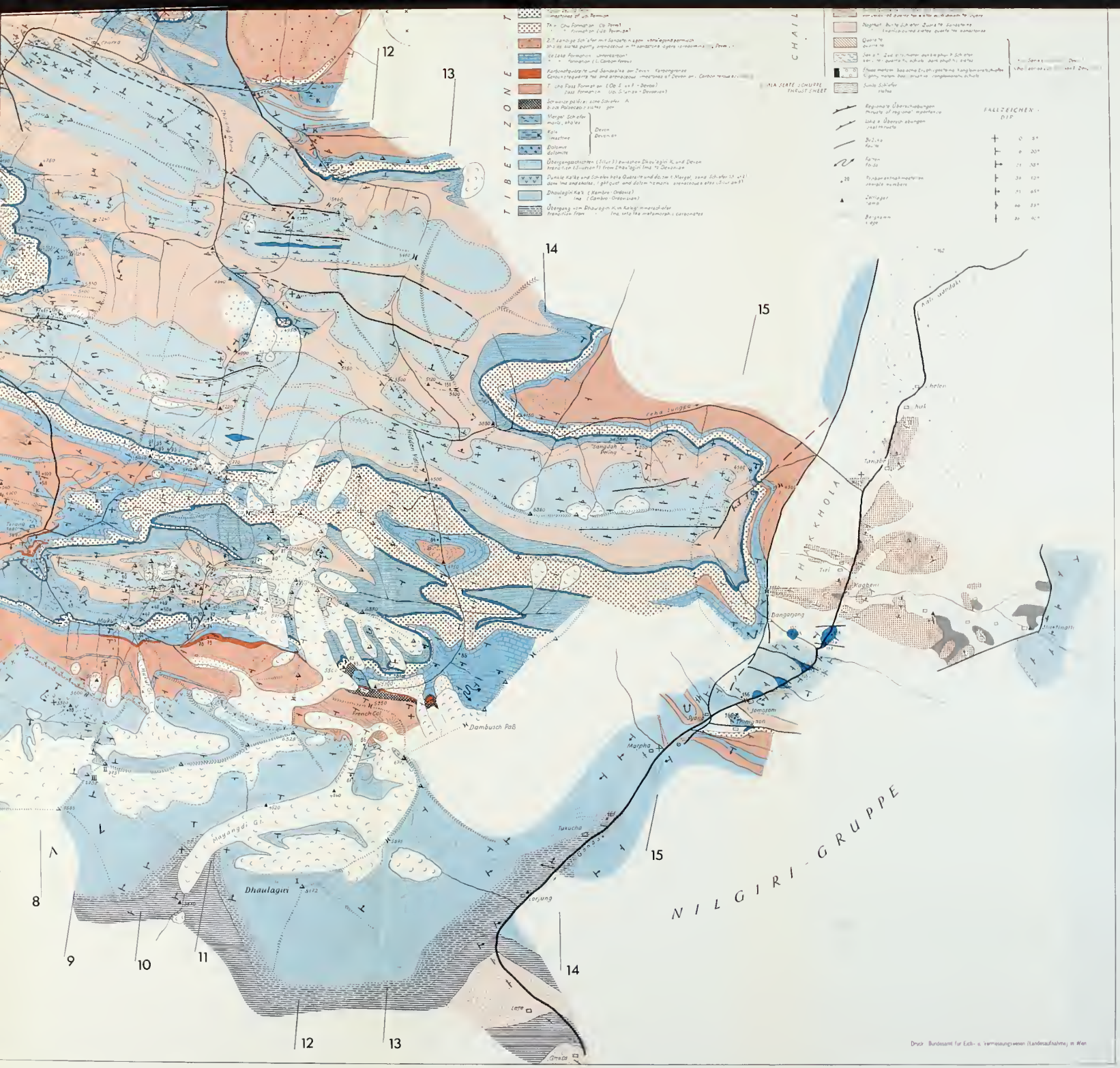

TIBET ZONE
CHAIL
FALLZEICHEN
DIP
Dhaulagiri
Dambusch Paß
French Col
Mayangdi Gl.
Dangarjong
Marpha
Tukucha
Larjung
Lete
Grasa
Tanabe
Kagbeni
Jomosom
Thimyson
Syang
Mukut
Tsarang
Chorea
Feha Lungpa
Sangdah Peling
Hidden Valley
Kali Gandaki
THAKKHOLA
NILGIRI-GRUPPE
8
9
10
11
12
13
14
15
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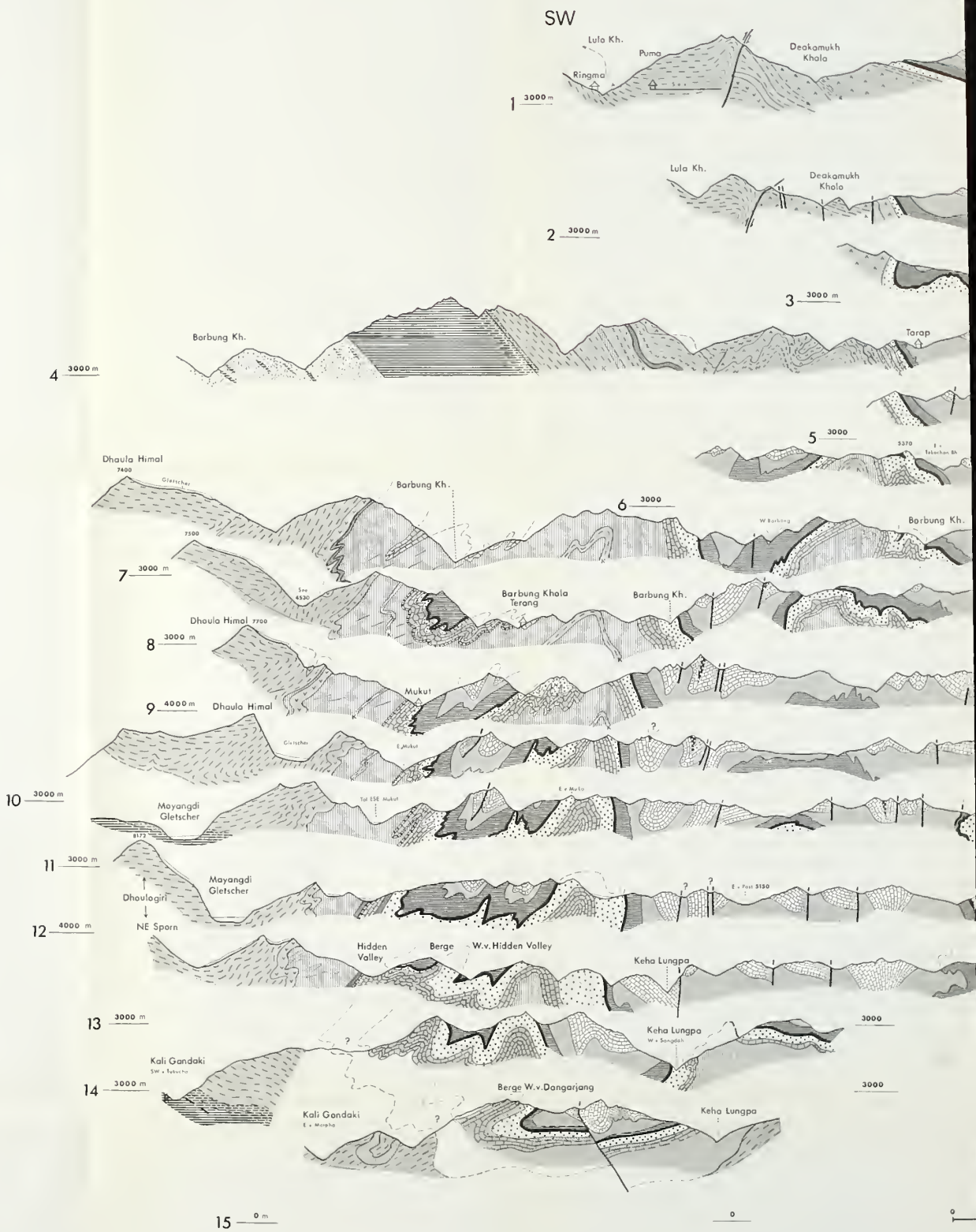
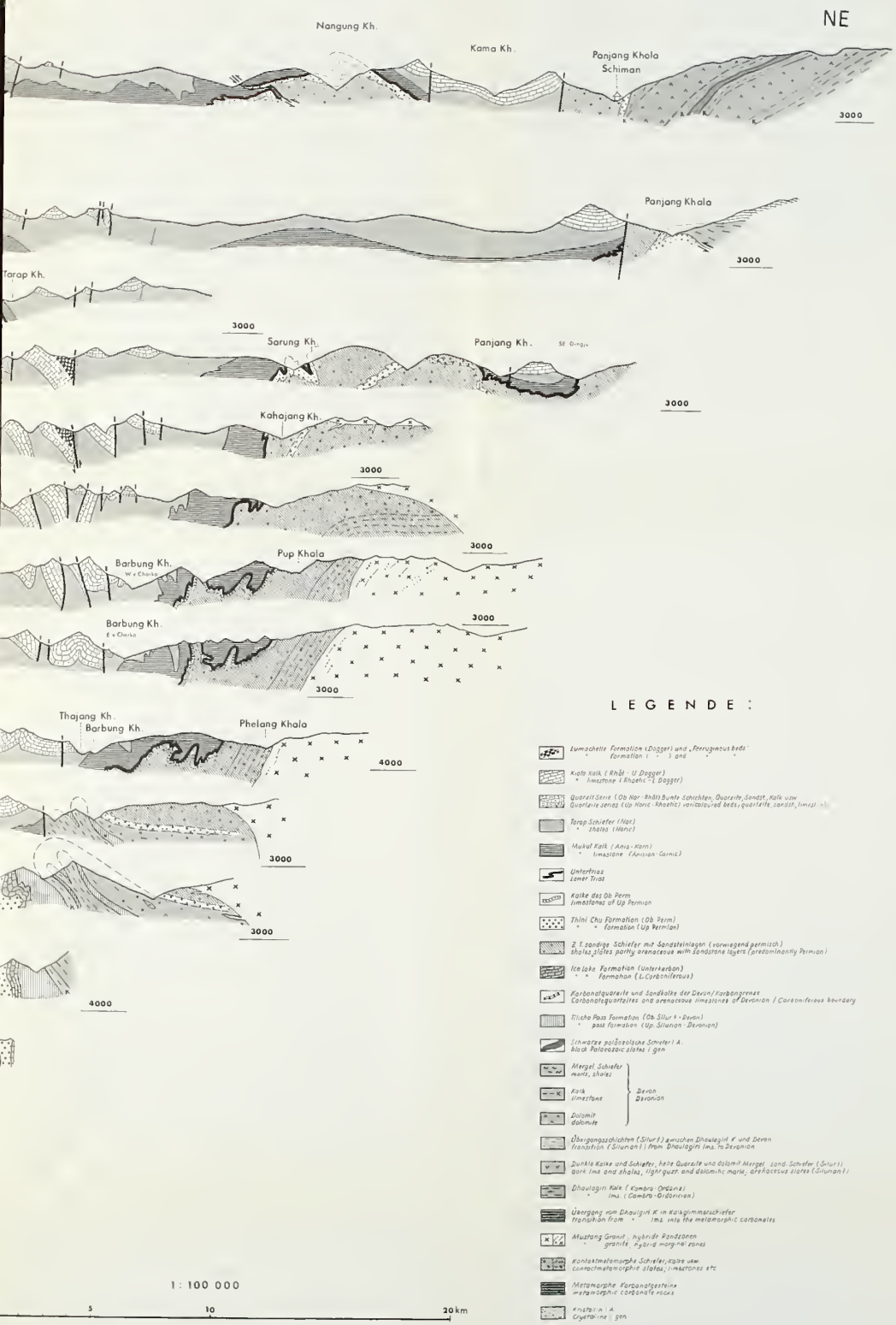
Profile durch Dolpo und den Dhaula Himal

Sections through the Dolpo region and t

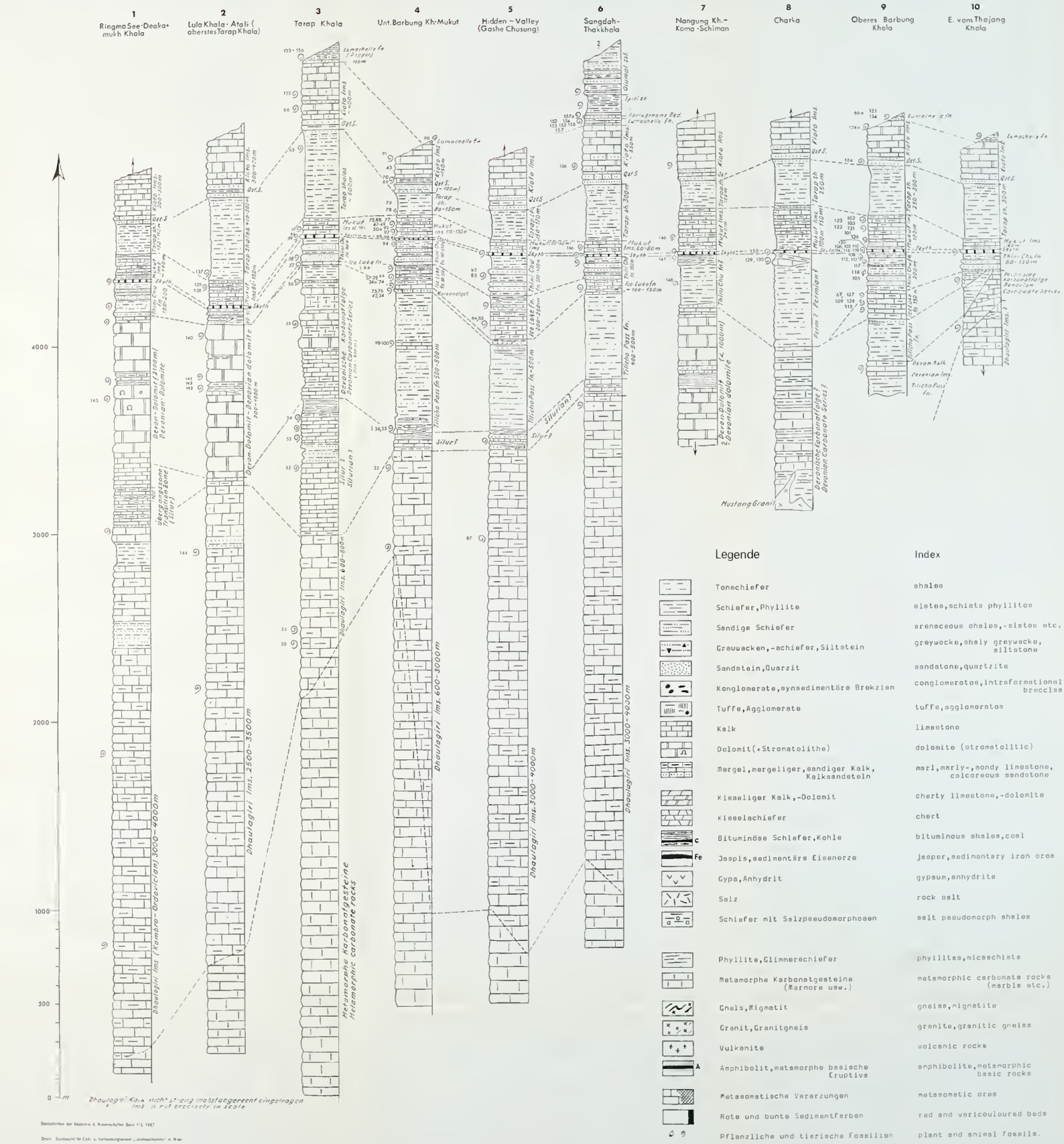


he Dhaula Himal



nicht überhöht
same scale

Säulenprofile aus der Tibet Zone W-NEPALS *Stratigraphic Sections from the Tibetan Zone of W-NEPAL*



Legende

		Index
	Tonschiefer	shales
	Schiefer, Phyllite	slates, schists phyllites
	Sandige Schiefer	arenaceous shales, -slates etc.
A	Grauwacken, -schiefer, Siltstein	greywacke, shaly greywacke, siltstone
	Sandstein, Quarzit	sandstone, quartzite
	Konglomerate, synsedimentäre Brekzien	conglomerates, intraformational breccias
	Tuffe, Agglomerate	tuffs, agglomerates
	Kalk	limestone
	Dolomit (+Stromatolithe)	dolomite (stromatolitic)
	Mergel, mergeliger, sandiger Kalk, Kalksandstein	marl, marly-, sandy limestone, calcareous sandstone
	Kieseliger Kalk, -Dolomit	cherty limestone, -dolomite
	Kieselschiefer	chert
C	Bituminöse Schiefer, Kohle	bituminous shales, coal
Fe	Jaspis, sedimentäre Eisenerze	jasper, sedimentary iron ores
	Gyps, Anhydrit	gypsum, anhydrite
	Salz	rock salt
	Schiefer mit Salzpseudomorphosen	salt pseudomorph shales
	Phyllite, Glimmerschiefer	phyllites, micaschists
	Metamorphe Karbonatgesteine (Marmore usw.)	metamorphic carbonate rocks (marbls etc.)
	Gneis, Migmatit	gneiss, migmatite
	Granit, Granitgneis	granite, granitic gneiss
	Vulkanite	volcanic rocks
A	Amphibolit, metamorphe basische Eruptiva	amphibolite, metamorphic basic rocks
	Metasomatische Vererzungen	metasomatic ores
	Rote und bunte Sedimentfarben	red and varicoloured beds
	Pflanzliche und tierische Fossilien	plant and animal fossils.

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